

**ABSTRACT**

The present invention relates to an auto loudness circuit for performing loudness compensation automatically depending on the signal level. When the signal level decreases, loudness compensation is slowly introduced and as the signal level increases, loudness compensation is quickly removed. To do so, the auto loudness circuit utilizes a filter circuit with the characteristic of a first order bass boost. The filter circuit maintains a corner frequency which is proportional to the inverse of audio level in order to mimic the Fletcher-Munson curves. Because the circuit employs a capacitance-multiplier with a first order resistance capacitance filter, the bass boost is inversely proportional to the signal level. Thus, bass boost is achieved automatically as the program content changes so that the listener is unaware of significant changes in program material as signal levels change either through increase or decrease in volume, crescendo or new material.

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